

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

Express No.: <u>ED 608 969 225 US</u> Sheet 1 of 5 of List of References

ATTY. DOCKET NO. 10589-033-999

APPLICATION NO. 10/551,304

APPLICANT

Trotta, C.

FILING DATE
May 18, 2006

art unit 1**639**

U.S. PATENT DOCUMENTS

| *EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR |
|----------------------|-----|-----------------|----------|------------------|---|
| | A01 | 2007/0020630 | 01/25/07 | Trotta C. | |
| #° | A02 | 4,987,071 | 01/22/91 | Cech et al. | |
| | A03 | 5,093,246 | 03/03/92 | Cech et al. | |
| | A04 | 5,310,664 | 05/10/94 | Butow et al. | |
| | A05 | 5,354,855 | 10/11/94 | Cech et al. | |
| | A06 | 5,439,797 | 08/08/95 | Tsien et al. | |
| | A07 | 5,591,610 | 01/07/97 | Cech et al. | |
| | A08 | 5,726,195 | 03/10/98 | Hill et al. | |
| | A09 | 5,776,738 | 07/07/98 | Dell'Orco Sr. | |
| | A10 | 5,939,288 | 08/17/99 | Thornburg | |
| | A11 | 5,994,124 | 11/30/99 | Bozzoni | |
| | A12 | 6,025,167 | 02/15/00 | Cech et al. | |
| | A13 | 6,180,399 | 01/30/01 | Cech et al. | |
| | A14 | 6,214,563 | 04/10/01 | Negulescu et al. | |
| | A15 | 6,221,587 | 04/27/01 | Ecker et al. | |
| | A16 | 6,221,612 | 04/24/01 | Knapp et al. | |
| | A17 | 6,232,070 | 05/05/01 | Shuman | |
| | A18 | 6,446,032 | 09/03/02 | Schimmel | |

FOREIGN PATENT DOCUMENTS

| - | | FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN) | DATE | NAME | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR | Т |
|---|-----|--|----------|--|---|---|
| | B01 | WO 01/25486 | 04/12/01 | University of Medicine and Dentistry of New Jersey | | |
| | B02 | WO 01/92463 | 12/06/01 | Istituto di biologia Cellulare, CNR | | |
| | В03 | WO 02/83837 | 10/24/02 | Almstead | | |
| | B04 | WO 02/83953 | 10/24/02 | PTC Therapuetics, Inc. | | |
| | B05 | WO 91/09942 | 07/11/91 | Board of Regents, The University of Texas System | | |
| | B06 | WO 98/49274 | 11/05/98 | Appligene-Oncor | | |
| | B07 | WO 99/20795 | 04/29/99 | Melica HB | | |

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EXAMINER

DATE CONSIDERED

Express No.: ED 608 969 225 US Sheet 2 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 | |
|---|--------------------------------|----------------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | FILING DATE May 18, 2006 | ART UNIT 1639 | |

| | FOREIGN PATENT DOCUMENTS | | | | | | | | |
|-------------|--------------------------|--|----------|-------------------------------------|---|---|--|--|--|
| | | FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN) | DATE | NAME | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR | т | | | |
| | B08 | WO 01/12820 | 02/22/01 | Health Research Institute | | | | | |
| | B09 | WO 02/40685 | 05/23/02 | Cornell Research Foundations, Inc. | | | | | |
| | B10 | WO 02/42326 | 05/30/02 | Biota Scientific Management Pty LTD | | | | | |
| | B11 | WO 04/001010 | 12/31/03 | PTC Therapeutics, Inc. | | | | | |
| | B12 | WO 04/087069 | 10/14/04 | PTC Therapeutics, Inc. | | | | | |
| | B13 | WO 04/087070 | 10/14/04 | PTC Therapeutics, Inc. | | | | | |
| | B14 | WO 04/087884 | 10/14/04 | PTC Therapeutics, Inc. | | | | | |
| | B15 | DE 3436818 | 04/10/89 | Hoechst AG | | | | | |
| | B16 | CN 1328156 | 12/26/01 | Wuhan Inst Of Virology Chinese | | | | | |
| | B17 | WO 00/67580 | 11/16/06 | SmithKline Beecham Corp. | | | | | |

| NON PATENT LITERATURE DOCUMENTS | | | | | |
|---------------------------------|-----|---|---|--|--|
| Examiner Initials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | Т | | |
| | C01 | ABELSON et al.,1998, "tRNA splicing." Journal of Biological Chemistry 273(21):12685-12688 | | | |
| | C02 | ADAMS et al., 1991, "Fluorescence ratio imaging of cyclic AMP in single cells." Nature 349:694-697 | | | |
| | C03 | BELFORD et al., 1993, "Multiple nucleotide cofactor use by yeast ligase in tRNA splicing. Evidence for independent ATP- and GTP-binding sites" J. Biol. Chem. 268(4):2444-2450 | | | |
| | C04 | BELFORT, M., & WEINER, A., 1997, "Another bridge between kingdoms: tRNA splicing in archaea and eukaryotes." Cell 89(7):1003-1006. | | | |
| | C05 | BJORK, G., 1995, "Biosynthesis and Function of Modified Nucleosides, in tRNA: Structure, Biosynthesis and Function." D. Soll & U. RajBhandary (eds.), American Society for Microbiology, Washington DC: pp. 165-205 | | | |
| | C06 | DEUTSCHER, M.P., 1995 "tRNA Processing Nucleases, in tRNA:Structure, Biosynthesis and Function." D. Soll and U. RjaBhandary (eds.), American Society for Microbiology, Washington DC: pp. 51-65 | | | |
| | C07 | DIENER & MOORE, 1998, "Solution Structure of a Substrate for the Archael Pre-tRNA Splicing Endonucleases: The Bulge-Helix-Bulge Motif." Mol. Cell. 1:883-894 | | | |
| | C08 | FRUSCOLONI et al., 2001, "Cleavage of non-tRNA substrates by eukaryal tRNA splicing endonucleases." EMBO Rep 2(3):217-221 | | | |
| | C09 | GENBANK: Accession No: NP_079541; "tRNA splicing endonuclease 2 homolog [Homo sapiens]" | | | |
| | C10 | GENBANK: Accession No: NT_005927.12; "Homo sapiens chromosome 3 reference genomic contig" | | | |
| | C11 | GENBANK: Accession No: NT_011225.9; "Homo sapiens chromosome 19 reference genomic contig." | | | |
| | C12 | GENBANK: Accession No: XP_085899; "similar to LENG5 protein [Homo sapiens]." | Γ | | |
| | C13 | GOMES et al., 1997, "RNA splicing ligase activity in the archaeon Haloferax volcanii" Biochem & Biophys. Res. Comm. 237:588-94 | | | |
| | C14 | GREER et al., 1982, "Mechanism of action of a yeast RNA ligase in tRNA splicing" Cell 32:537-546 | | | |

NYI-3914639v3

EXAMINER DATE CONSIDERED

Express No.: <u>ED 608 969 225 US</u> Sheet 3 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 | |
|---|--------------------------------|----------------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | filing date May 18, 2006 | ART UNIT 1639 | |

| | C15 C16 C17 C18 | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) GREER., 1986, "Assembly of tRNA Splicing Complex: Evidence for Concerted Excision and Joining Steps in Splicing In Vitro." Mol. and Cellular. Bio., 6(2):638-642 HYDE-DERUYSCHER et al., 2000, "Detection of Small-Molecule Enzyme Inhibitors with Peptides Isolated from Phage-Displayed Combinatorial Peptide Libraries." Chem. & Biol. 7:17-25 IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. | Т |
|-----|-----------------|---|--------------|
| | C16 | GREER., 1986, "Assembly of tRNA Splicing Complex: Evidence for Concerted Excision and Joining Steps in Splicing In Vitro." Mol. and Cellular. Bio., 6(2):638-642 HYDE-DERUYSCHER et al., 2000, "Detection of Small-Molecule Enzyme Inhibitors with Peptides Isolated from Phage-Displayed Combinatorial Peptide Libraries." Chem. & Biol. 7:17-25 IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. | |
| | C16 | Splicing In Vitro." Mol. and Cellular. Bio., 6(2):638-642 HYDE-DERUYSCHER et al., 2000, "Detection of Small-Molecule Enzyme Inhibitors with Peptides Isolated from Phage-Displayed Combinatorial Peptide Libraries." Chem. & Biol. 7:17-25 IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. | |
| | C17 | HYDE-DERUYSCHER et al., 2000, "Detection of Small-Molecule Enzyme Inhibitors with Peptides Isolated from Phage-Displayed Combinatorial Peptide Libraries." Chem. & Biol. 7:17-25 IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. | \vdash |
| | C17 | from Phage-Displayed Combinatorial Peptide Libraries." Chem. & Biol. 7:17-25 IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. | |
| | | IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. | |
| | | | ┼ |
| | C18 | | |
| | C18 | Evol., 2(1):13-34 | - |
| | | IKEMURA, T. AND OKEKI, H., 1983, "Codon usage and transfer RNA contents: organism-specific codon- | 1 |
| | | choice patterns in reference to the isoacceptor contents." Cold Spring Harbor Symp. Quant. Biol. 47:1087-1097 | |
| | C19 | KLEMAN-LEYER et al., 1997, "Properties of H. volcanii tRNA Intron Endonuclease Reveal a Relationship | |
| | | between the Archaeal and Eucaryal tRNA Intron Processing Systems." Cell., 89:839-847 | - |
| 1 | C20 | LI & ABELSON, 2000, "Crystal Structure of a Dimeric Archaeal Splicing Endonuclease." J. Mol. Biol. | |
| | | 302:639-648. | ╄ |
| | C21 | LI et al., 1998, "Crystal structure and evolution of a transfer RNA splicing enzyme" Science 280(5361):279-284 | |
| | COO | LYKKE-ANDERSEN, J. & GARRETT, R.A., 1997, "RNA-protein interactions of an archaeal homotetrameric | T |
| ' | C22 | splicing endoribonuclease with an exceptional evolutionary history." EMBO J 16(20):6290-6300. | |
| | | PHIZICKY et al., 1986, "Saccharomyces cerevisiae tRNA ligase. Purification of the protein and isolation of the | T |
| | C23 | structural gene" J. of Biol. Chem. 261(6):2978-2986 | |
| 110 | 024 | OIN & PYLE, 1999, "Site-specific labeling of RNA with fluorophores and other structural probes." Methods 18 | |
| 1 | C24 | (1):60-70 | 1 |
| | 005 | REYES & ABELSON 1988, "Substrate Recognition and Splice Site Determination in Yeast tRNA Splicing." | t |
| ' | C25 | Cell, 55:719-730 | |
| | C24 | SARKAR & HOPPER., 1998, "tRNA Nuclear Export in Saccharomyces cerevisiae: In Situ Hybridization | † |
| | C26 | Analysis." Mol. Biol. of the Cell., 9:3041-3055 | |
| | C07 | SAXENA et al., 1992, "Angiogenin is a Cytotoxic, tRNA-specific Ribonuclease in the RNase A Superfamily." | 1 |
| [] | C27 | J. of Biol. Chem. 267(30):21982-21986 | |
| | 600 | TROTTA et al., 1997, "The yeast tRNA splicing endonuclease: a tetrameric enzyme with two active site | t |
| 1 | C28 | subunits homologous to the archaeal tRNA endonucleases." Cell 89:849-858. | 1 |
| | G20 | TROTTA, C.R. AND ABELSON, J.N., 1999, "tRNA Splicing: An RNA World Add-On or an Ancient | T |
| | C29 | Reaction? In RNA World II" Tom Cech, Ray Gesteland and John Atkins (eds.), Cold Spring Harbor Laboratory | 1 |
| | | Press, 561-584 | 1 |
| | | TROTTA., 1999, "The Composition, Function and Evolution of the tRNA Splicing Endonuclease." Thesis, | + |
| | C30 | California Institute of Technology, pp.1-147 | |
| | | TSIEN et al., 1993, "FRET for studying intracellular signaling." Trends in Cell. Bio. 3(7): 242-245 | † |
| | C31 | | ┸ |
| | C32 | VAUGHN et al., 2002, "Methonine In and Out of Proteins: Targets for Drug Design." Curr. Med. Chem. | |
| | | 9(3):385-409 | ╄ |
| | C33 | VOLAREVIC et al., 2000, "Proliferation, But not Growth Blocked by Conditional Deletion of 40S Ribosomal | |
| | | Protein S6." Science 288:2045-2047 | \perp |
| | C34 | WANG et al., 1990, "Substrate Masking: Binding of RNA by EGTA-Inactivated Micrococcal Nuclease Resutls | 1 |
| | | in Artifactual Inhibition of RNA Processing Reactions." Nuc. Acids Res. 18(22):6625-6626 | 丄 |
| | C35 | WINTER et al., 2000, "RNA polymerase III transcription factor TFIIIC2 is overexpressed in ovarian tumors." | |
| | | Proc. Natl. Acad. Sci., 97(23):12619-12624 | \perp |
| | C36 | XU et al., 1990, "Purification of yeast transfer RNA ligase." Meth. in Enzymol. 181:463-471 | |
| | C37 | Yeast Accession No: M32336; SEN2: "http://www.yeastgenome.org/" | + |

NYI-3914639v3

Express No.: <u>ED 608 969 225 US</u> Sheet 4 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 | |
|---|--------------------------------|----------------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | FILING DATE May 18, 2006 | ART UNIT 1639 | |

| | | NON PATENT LITERATURE DOCUMENTS | |
|--------------|-----|---|----------|
| Examiner | | | Ī_ |
| nitials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) Yeast Accession No: YAR008w; SEN34 "http://www.yeastgenome.org/" | T |
| | C38 | | <u> </u> |
| | C39 | Yeast Accession No: YMR059w; SEN 15 "http://www.yeastgenome.org/" | |
| - | C40 | Yeast Accession No: YPL083c; SEN54 "http://www.yeastgenome.org/" | |
| | C41 | ZHANG et al., 1997, "Gene Expression Profiles in Normal and Cancer Cells." Science 276:1268-1272 | |
| | C42 | BALDI et al., 1992, "Participation of the intron in the reaction catalyzed by the Xenopus tRNA splicing endonuclease." Science 255:1404-1408. | |
| | C43 | BARBINO & KELLLER, 1999, "Last but not least: regulated poly(A) tail formation." Cell 99(1):9-11 | |
| | C44 | BUJNICKI, J.M., & RYCHLEWSKI, L., 2000, "Prediction of a common fold for all four subunits of the yeast tRNA splicing endonuclease: implications for the evolution of the EndA/Sen family." FEBS Lett 486: 328-329. | |
| | C45 | BUVOLI et al, 2000, "Suppression of nonsense mutations in cell culture and mice by multimerized suppressor tRNA genes" Molecular and Cellular Biology 20(9):3116-3124 | |
| | C46 | CALVO, O., AND MANLEY, J.L., 2003, "Strange bedfellows: polyadenylation factors at the promoter." Genes Dev 17(11):1321-1327. | |
| | C47 | CHOI AND DREYFUSS, 1984, "Monoclonal antibody characterization of the C proteins of heterogeneous nuclear ribonucleoprotein complexes in vertebrate cells." J. Cell. Biol. 99(6):1997-2004 | |
| | C48 | CULVER et al., 1997, "A 2'-phosphotransferase implicated in tRNA splicing is essential in Saccharomyces cerevisiae." J Biol Chem 272:13203-13210. | |
| | C49 | DE VRIES, H. et al., 2000, "Human pre-mRNA cleavage factor II(m) contains homologs of yeast proteins and bridges two other cleavage factors." EMBO J 19:5895-5904. | |
| | C50 | FABBRI, S et al., 1998, "Conservation of substrate recognition mechanisms by tRNA splicing endonucleases." Science 280, 284-286. | |
| | C51 | FRANK & PACE, 1998, "Ribonuclease P: unity and diversity in a tRNA processing ribozyme." Annu Rev Biochem 67, 153-180. | |
| | C52 | GANDINI-ATTARDI, et al., 1990, "Transfer RNA splicing endonuclease from <i>Xenopus laevis</i> ." Methods Enzymol 181:510-517. | |
| | C53 | HIROSE AND MANLEY, 2000, "RNA polymerase II and the integration of nuclear events." Genes Dev., 14(12):1415-1429 | |
| | C54 | HOPPER, A.K., AND PHIZICKY, E.M., 2003, "tRNA transfers to the limelight." Genes Dev 17(2):162-180. | |
| | C55 | HUH, et al., 2003, "Global analysis of protein localization in budding yeast." Nature 425:686-691. | |
| | C56 | JACOBSON et al., 1997, "Nuclear domains of the RNA subunit of RNase P." J Cell Sci. 110 (Pt 7):829-837. | T |
| | C57 | LASKI, F.A. et al., 1983, "Characterization of tRNA precursor splicing in mammalian extracts." J Biol. Chem. 258(19):11974-11980. | |
| | C58 | MINVIELLE-SEBASTIA, L. & KELLER, W., 1999, "mRNA polyadenylation and its coupling to other RNA processing reactions and to transcription." Curr. Opin. Cell. Biol. 11:352-357 | |
| | C59 | O'CONNOR, J.P., & PEEBLES, C.L., 1992, "PTA1, an essential gene of <i>Saccharomyces cerevisiae</i> affecting pre-tRNA processing." Mol Cell Biol 12:3843-3856. | |
| | C60 | OTSUKA, et al., 1981, "Ribonuclease 'XlaI' an activity from Xenopus laevis oocytes that excises intervening sequences from yeast transfer ribonucleic acid precursors." Mol Cell Biol 1:269-280. | |
| | C61 | PARK & BHANDARY, 1998, "Tetracycline-regulated suppression of amber codons in mammalian cells." Mol. & Cell. Biol. 18:4418-4425 | |
| | C62 | PREKER et al., 1997, "A multisubunit 3'-end processing factor from yeast containing poly(A) polymerase and | Τ |

NYI-3914639v3

EXAMINER DATE CONSIDERED

Express No.: <u>ED 608 969 225 US</u> Sheet 5 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 |
|---|--------------------------------|----------------------------|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | |
| | FILING DATE May 18, 2006 | ART UNIT |

| | | NON PATENT LITERATURE DOCUMENTS | |
|----------------------|-----|--|---|
| Examiner Initials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | Т |
| | | homologues of the subunits of mammalian cleavage and polyadenylation specificity factor." EMBO J 16:4727-4737. | |
| | C63 | PROUDFOOT, 2000, "Connecting transcription to messenger RNA processing." Trends Biochem Sci. 2000 Jun;25(6):290-3. Review. | |
| | C64 | RAUHUT et al., 1990, "Yeast tRNA-splicing endonuclease is a heterotrimeric enzyme." J Biol. Chem. 265(30): 18180-18184. | |
| | C65 | REYES et al., 1987, "A synthetic substrate for tRNA splicing." Anal. Biochem. 166(1):90-106 | |
| | C66 | STANDRING et al., 1981, "Yeast tRNA3Leu gene transcribed and spliced in a HeLa cell extract." Proc. Natl. Acad. Sci. USA 78(10):5963-5967. | |
| | C67 | TAKAGAKI et al., 2000, "Complex protein interactions within the human polyadenylation machinery identify a novel component." Mol. Cell. Biol. 20:1515-1525. | |
| | C68 | TAKAKU et al., 2003, "A candidate prostate cancer susceptibility gene encodes tRNA 3' processing endoribonuclease." Nucleic Acids Res 31(9):2272-2278. | |
| | C69 | WAHLE & RUEGSEGGER, 1999, "3'-End processing of pre-mRNA in eukaryotes." FEMS Micro Rev., 23(3):277-295 | |
| | C70 | WALLACE et al., 1999, "Two distinct forms of the 64,000 Mr protein of the cleavage stimulation factor are expressed in mouse male germ cells." Proc. Natl. Acad. Sci. 96(12):6763-6768 | |
| | C71 | XIAO et al., 2002, "Eukaryotic ribonuclease P: a plurality of ribonucleoprotein enzymes." Annu Rev Biochem 71, 165-189. | |
| | C72 | YOSHIHISA et al., 2003, "Possibility of cytoplasmic pre-tRNA splicing: the yeast tRNA splicing endonuclease mainly localizes on the mitochondria." Mol Biol Cell 14(8):3266-3279. | |
| | C73 | ZHAO, 1999 "Formation of mRNA 3' ends in eukaryotes: mechanism, regulation, and interrelationships with other steps in mRNA synthesis." Microbiol. Mol. Biol. Rev. 63:405-445 | |
| | C74 | MIAO et al., 1993, "Yeast tRNA-splicing endonuclease cleaves precursor tRNA in a random pathway," J. Biol. Chem. 268(1):672-7 | |

NYI-3914639v3

EXAMINER

Express No.: ED 608 969 225 US Sheet 1 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 |
|---|-----------------------------------|----------------------------|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | |
| | FILING DATE May 18, 2006 | ART UNIT 1639 |

| U.S. PATENT DOCUMENTS | | | | | |
|---|-----|-----------------|----------|------------------|---|
| *EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR |
| 111111111111111111111111111111111111111 | A01 | 2007/0020630 | 01/25/07 | Trotta C. | |
| | A02 | 4,987,071 | 01/22/91 | Cech et al. | |
| | A03 | 5,093,246 | 03/03/92 | Cech et al. | |
| | A04 | 5,310,664 | 05/10/94 | Butow et al. | |
| | A05 | 5,354,855 | 10/11/94 | Cech et al. | |
| | A06 | 5,439,797 | 08/08/95 | Tsien et al. | |
| | A07 | 5,591,610 | 01/07/97 | Cech et al. | |
| | A08 | 5,726,195 | 03/10/98 | Hill et al. | |
| | A09 | 5,776,738 | 07/07/98 | Dell'Orco Sr. | |
| | A10 | 5,939,288 | 08/17/99 | Thornburg | |
| | A11 | 5,994,124 | 11/30/99 | Bozzoni | |
| | A12 | 6,025,167 | 02/15/00 | Cech et al. | |
| | A13 | 6,180,399 | 01/30/01 | Cech et al. | |
| | A14 | 6,214,563 | 04/10/01 | Negulescu et al. | |
| | A15 | 6,221,587 | 04/27/01 | Ecker et al. | |
| | A16 | 6,221,612 | 04/24/01 | Knapp et al. | |
| | A17 | 6,232,070 | 05/05/01 | Shuman | |
| .,, | A18 | 6,446,032 | 09/03/02 | Schimmel | |

| | | FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, | | | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR | Т |
|---|-----|---|----------|--|---|-----|
| | | KIND CODE (IF KNOWN) | DATE | NAME NAME | RELEVANT FIGURES APPEAR | ┝─┴ |
| 1 | B01 | WO 01/25486 | 04/12/01 | University of Medicine and Dentistry of New Jersey | | |
| 1 | B02 | WO 01/92463 | 12/06/01 | Istituto di biologia Cellulare, CNR | | |
| 1 | B03 | WO 02/83837 | 10/24/02 | Almstead | | |
| | B04 | WO 02/83953 | 10/24/02 | PTC Therapuetics, Inc. | | |
| 1 | B05 | WO 91/09942 | 07/11/91 | Board of Regents, The University of Texas System | | |
| 1 | B06 | WO 98/49274 | 11/05/98 | Appligene-Oncor | | L |
| | B07 | WO 99/20795 | 04/29/99 | Melica HB | | |

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EXAMINER

DATE CONSIDERED

Express No.: <u>ED 608 969 225 US</u> Sheet 2 of 5 of List of References

| | ATTY. DOCKET NO. | APPLICATION NO. | |
|---------------------------------------|------------------|-----------------|--|
| | 10589-033-999 | 10/551,304 | |
| LIST OF REFERENCES CITED BY APPLICANT | APPLICANT | | |
| (Use several sheets if necessary) | Trotta, C. | | |
| | FILING DATE | ART UNIT | |
| | May 18, 2006 | 1639 | |

| | | FOREIG | N PATENT DOCUMENTS | | |
|---------|--|----------|-------------------------------------|---|----------|
| | FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN) | DATE | NAME | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR | т |
| B08 | WO 01/12820 | 02/22/01 | Health Research Institute | | <u> </u> |
| B09 | WO 02/40685 | 05/23/02 | Cornell Research Foundations, Inc. | | |
| B10 | WO 02/42326 | 05/30/02 | Biota Scientific Management Pty LTD | | |
| B11 | WO 04/001010 | 12/31/03 | PTC Therapeutics, Inc. | | |
| B12 | WO 04/087069 | 10/14/04 | PTC Therapeutics, Inc. | | |
| B13 | WO 04/087070 | 10/14/04 | PTC Therapeutics, Inc. | | |
| B14 | WO 04/087884 | 10/14/04 | PTC Therapeutics, Inc. | | |
| B15 | DE 3436818 | 04/10/89 | Hoechst AG | | T |
| B16 | CN 1328156 | 12/26/01 | Wuhan Inst Of Virology Chinese | | |
| B17 | WO 00/67580 | 11/16/06 | SmithKline Beecham Corp. | | |

| Examiner nitials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | T |
|---------------------|-----|---|---|
| muais | C01 | ABELSON et al., 1998, "tRNA splicing." Journal of Biological Chemistry 273(21):12685-12688 | Г |
| | C02 | ADAMS et al., 1991, "Fluorescence ratio imaging of cyclic AMP in single cells." Nature 349:694-697 | ┢ |
| | C02 | BELFORD et al., 1993, "Multiple nucleotide cofactor use by yeast ligase in tRNA splicing. Evidence for independent ATP- and GTP-binding sites" J. Biol. Chem. 268(4):2444-2450 | |
| | C04 | BELFORT, M., & WEINER, A., 1997, "Another bridge between kingdoms: tRNA splicing in archaea and eukaryotes." Cell 89(7):1003-1006. | |
| | C05 | BJORK, G., 1995, "Biosynthesis and Function of Modified Nucleosides, in tRNA: Structure, Biosynthesis and Function." D. Soll & U. RajBhandary (eds.), American Society for Microbiology, Washington DC: pp. 165-205 | |
| | C06 | DEUTSCHER, M.P., 1995 "tRNA Processing Nucleases, in tRNA:Structure, Biosynthesis and Function." D. Soll and U. RjaBhandary (eds.), American Society for Microbiology, Washington DC: pp. 51-65 | |
| | C07 | DIENER & MOORE, 1998, "Solution Structure of a Substrate for the Archael Pre-tRNA Splicing Endonucleases: The Bulge-Helix-Bulge Motif." Mol. Cell. 1:883-894 | |
| | C08 | FRUSCOLONI et al., 2001, "Cleavage of non-tRNA substrates by eukaryal tRNA splicing endonucleases." EMBO Rep 2(3):217-221 | |
| | C09 | GENBANK: Accession No: NP_079541; "tRNA splicing endonuclease 2 homolog [Homo sapiens]" | |
| | C10 | GENBANK: Accession No: NT_005927.12; "Homo sapiens chromosome 3 reference genomic contig" | |
| | C11 | GENBANK: Accession No: NT_011225.9; "Homo sapiens chromosome 19 reference genomic contig." | |
| | C12 | GENBANK: Accession No: XP_085899; "similar to LENG5 protein [Homo sapiens]." | |
| | C13 | GOMES et al., 1997, "RNA splicing ligase activity in the archaeon Haloferax volcanii" Biochem & Biophys. Res. Comm. 237:588-94 | |
| | C14 | GREER et al., 1982, "Mechanism of action of a yeast RNA ligase in tRNA splicing" Cell 32:537-546 | 1 |

NYI-3914639v3

EXAMINER

DATE CONSIDERED

Express No.: <u>ED 608 969 225 US</u> Sheet 3 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 |
|---|--------------------------------|----------------------------|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | |
| | FILING DATE May 18, 2006 | ART UNIT 1639 |

| | | NON PATENT LITERATURE DOCUMENTS | |
|------------|-----|---|----------|
| Examiner | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | Т |
| Initials | C15 | GREER., 1986, "Assembly of tRNA Splicing Complex: Evidence for Concerted Excision and Joining Steps in Splicing In Vitro." Mol. and Cellular. Bio., 6(2):638-642 | - |
| | C16 | HYDE-DERUYSCHER et al., 2000, "Detection of Small-Molecule Enzyme Inhibitors with Peptides Isolated from Phage-Displayed Combinatorial Peptide Libraries." Chem. & Biol. 7:17-25 | |
| | C17 | IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. Evol., 2(1):13-34 | |
| | C18 | IKEMURA, T. AND OKEKI, H., 1983, "Codon usage and transfer RNA contents: organism-specific codon-choice patterns in reference to the isoacceptor contents." Cold Spring Harbor Symp. Quant. Biol. 47:1087-1097 | |
| | C19 | KLEMAN-LEYER et al., 1997, "Properties of H. volcanii tRNA Intron Endonuclease Reveal a Relationship between the Archaeal and Eucaryal tRNA Intron Processing Systems." Cell., 89:839-847 | |
| | C20 | LI & ABELSON, 2000, "Crystal Structure of a Dimeric Archaeal Splicing Endonuclease." J. Mol. Biol. 302:639-648. | |
| | C21 | LI et al., 1998, "Crystal structure and evolution of a transfer RNA splicing enzyme" Science 280(5361):279-284 | <u> </u> |
| | C22 | LYKKE-ANDERSEN, J. & GARRETT, R.A., 1997, "RNA-protein interactions of an archaeal homotetrameric splicing endoribonuclease with an exceptional evolutionary history." EMBO J 16(20):6290-6300. | |
| | C23 | PHIZICKY et al., 1986, "Saccharomyces cerevisiae tRNA ligase. Purification of the protein and isolation of the structural gene" J. of Biol. Chem. 261(6):2978-2986 | |
| | C24 | QIN & PYLE, 1999, "Site-specific labeling of RNA with fluorophores and other structural probes." Methods 18 (1):60-70 | |
| | C25 | REYES & ABELSON 1988, "Substrate Recognition and Splice Site Determination in Yeast tRNA Splicing." Cell, 55:719-730 | |
| | C26 | SARKAR & HOPPER., 1998, "tRNA Nuclear Export in Saccharomyces cerevisiae: In Situ Hybridization Analysis." Mol. Biol. of the Cell., 9:3041-3055 | |
| | C27 | SAXENA et al., 1992, "Angiogenin is a Cytotoxic, tRNA-specific Ribonuclease in the RNase A Superfamily." J. of Biol. Chem. 267(30):21982-21986 | |
| | C28 | TROTTA et al., 1997, "The yeast tRNA splicing endonuclease: a tetrameric enzyme with two active site subunits homologous to the archaeal tRNA endonucleases." Cell 89:849-858. | |
| | C29 | TROTTA, C.R. AND ABELSON, J.N., 1999, "tRNA Splicing: An RNA World Add-On or an Ancient Reaction? In RNA World II" Tom Cech, Ray Gesteland and John Atkins (eds.), Cold Spring Harbor Laboratory Press, 561-584 | |
| | C30 | TROTTA., 1999, "The Composition, Function and Evolution of the tRNA Splicing Endonuclease." Thesis, California Institute of Technology, pp.1-147 | |
| | C31 | TSIEN et al., 1993, "FRET for studying intracellular signaling." Trends in Cell. Bio. 3(7): 242-245 | |
| | C32 | VAUGHN et al., 2002, "Methonine In and Out of Proteins: Targets for Drug Design." Curr. Med. Chem. 9(3):385-409 | |
| | C33 | VOLAREVIC et al., 2000, "Proliferation, But not Growth Blocked by Conditional Deletion of 40S Ribosomal Protein S6." Science 288:2045-2047 | |
| | C34 | WANG et al., 1990, "Substrate Masking: Binding of RNA by EGTA-Inactivated Micrococcal Nuclease Results in Artifactual Inhibition of RNA Processing Reactions." Nuc. Acids Res. 18(22):6625-6626 | |
| | C35 | WINTER et al., 2000, "RNA polymerase III transcription factor TFIIIC2 is overexpressed in ovarian tumors." Proc. Natl. Acad. Sci., 97(23):12619-12624 | |
| ·········· | C36 | XU et al., 1990, "Purification of yeast transfer RNA ligase." Meth. in Enzymol. 181:463-471 | |
| | C37 | Yeast Accession No: M32336; SEN2: "http://www.yeastgenome.org/" | |

NYI-3914639v3

| EXAMINER | DATE CONSIDERED |
|---|---|
| *EXAMINER: Initial if reference considered, whether or not citation is in conformal considered. Include copy of this form with next communication to applicant. | nce with MPEP 609; Draw line through citation if not in conformance and not |

Express No.: <u>ED 608 969 225 US</u> Sheet 4 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 |
|---|--------------------------------|----------------------------|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | |
| | filing date May 18, 2006 | ART UNIT 1639 |

| | | NON PATENT LITERATURE DOCUMENTS | |
|----------|-----|---|-----------|
| Examiner | T : | (Label and a City CADITAL LETTERS) Title Date Partinent Pages Etc.) | Т |
| nitials | C38 | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) Yeast Accession No: YAR008w; SEN34 "http://www.yeastgenome.org/" | Ė |
| | C39 | Yeast Accession No: YMR059w; SEN 15 "http://www.yeastgenome.org/" | T |
| | C40 | Yeast Accession No: YPL083c; SEN54 "http://www.yeastgenome.org/" | T |
| | C41 | ZHANG et al., 1997, "Gene Expression Profiles in Normal and Cancer Cells." Science 276:1268-1272 | T |
| | C42 | BALDI et al., 1992, "Participation of the intron in the reaction catalyzed by the Xenopus tRNA splicing endonuclease." Science 255:1404-1408. | T |
| | C43 | BARBINO & KELLLER, 1999, "Last but not least: regulated poly(A) tail formation." Cell 99(1):9-11 | T |
| | C44 | BUJNICKI, J.M., & RYCHLEWSKI, L., 2000, "Prediction of a common fold for all four subunits of the yeast tRNA splicing endonuclease: implications for the evolution of the EndA/Sen family." FEBS Lett 486: 328-329. | |
| | C45 | BUVOLI et al, 2000, "Suppression of nonsense mutations in cell culture and mice by multimerized suppressor tRNA genes" Molecular and Cellular Biology 20(9):3116-3124 | |
| | C46 | CALVO, O., AND MANLEY, J.L., 2003, "Strange bedfellows: polyadenylation factors at the promoter." Genes Dev 17(11):1321-1327. | |
| | C47 | CHOI AND DREYFUSS, 1984, "Monoclonal antibody characterization of the C proteins of heterogeneous nuclear ribonucleoprotein complexes in vertebrate cells." J. Cell. Biol. 99(6):1997-2004 | |
| | C48 | CULVER et al., 1997, "A 2'-phosphotransferase implicated in tRNA splicing is essential in <i>Saccharomyces cerevisiae</i> ." J Biol Chem 272:13203-13210. | |
| | C49 | DE VRIES, H. et al., 2000, "Human pre-mRNA cleavage factor II(m) contains homologs of yeast proteins and bridges two other cleavage factors." EMBO J 19:5895-5904. | |
| | C50 | FABBRI, S et al., 1998, "Conservation of substrate recognition mechanisms by tRNA splicing endonucleases." Science 280, 284-286. | |
| | C51 | FRANK & PACE, 1998, "Ribonuclease P: unity and diversity in a tRNA processing ribozyme." Annu Rev Biochem 67, 153-180. | |
| | C52 | GANDINI-ATTARDI, et al., 1990, "Transfer RNA splicing endonuclease from <i>Xenopus laevis</i> ." Methods Enzymol 181:510-517. | |
| | C53 | HIROSE AND MANLEY, 2000, "RNA polymerase II and the integration of nuclear events." Genes Dev., 14(12):1415-1429 | T |
| | C54 | HOPPER, A.K., AND PHIZICKY, E.M., 2003, "tRNA transfers to the limelight." Genes Dev 17(2):162-180. | T |
| | C55 | HUH, et al., 2003, "Global analysis of protein localization in budding yeast." Nature 425:686-691. | T |
| | C56 | JACOBSON et al., 1997, "Nuclear domains of the RNA subunit of RNase P." J Cell Sci. 110 (Pt 7):829-837. | 1- |
| | C57 | LASKI, F.A. et al., 1983, "Characterization of tRNA precursor splicing in mammalian extracts." J Biol. Chem. 258(19):11974-11980. | T |
| | C58 | MINVIELLE-SEBASTIA, L. & KELLER, W., 1999, "mRNA polyadenylation and its coupling to other RNA processing reactions and to transcription." Curr. Opin. Cell. Biol. 11:352-357 | |
| | C59 | O'CONNOR, J.P., & PEEBLES, C.L., 1992, "PTA1, an essential gene of <i>Saccharomyces cerevisiae</i> affecting pre-tRNA processing." Mol Cell Biol 12:3843-3856. | |
| | C60 | OTSUKA, et al., 1981, "Ribonuclease 'Xlal' an activity from Xenopus laevis oocytes that excises intervening sequences from yeast transfer ribonucleic acid precursors." Mol Cell Biol 1:269-280. | |
| | C61 | PARK & BHANDARY, 1998, "Tetracycline-regulated suppression of amber codons in mammalian cells." Mol. & Cell. Biol. 18:4418-4425 | T |
| | C62 | PREKER et al., 1997, "A multisubunit 3'-end processing factor from yeast containing poly(A) polymerase and | \dagger |

NYI-3914639v3

EXAMINER

DATE CONSIDERED

Express No.: <u>ED 608 969 225 US</u> Sheet 5 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 | |
|---|--------------------------------|----------------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | FILING DATE May 18, 2006 | ART UNIT 1639 | |

| NON PATENT LITERATURE DOCUMENTS | | | | | |
|---------------------------------|-----|--|---|--|--|
| Examiner Initials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | Т | | |
| | | homologues of the subunits of mammalian cleavage and polyadenylation specificity factor." EMBO J 16:4727-4737. | | | |
| | C63 | PROUDFOOT, 2000, "Connecting transcription to messenger RNA processing." Trends Biochem Sci. 2000 Jun;25(6):290-3. Review. | | | |
| | C64 | RAUHUT et al., 1990, "Yeast tRNA-splicing endonuclease is a heterotrimeric enzyme." J Biol. Chem. 265(30): 18180-18184. | | | |
| | C65 | REYES et al., 1987, "A synthetic substrate for tRNA splicing." Anal. Biochem. 166(1):90-106 | | | |
| | C66 | STANDRING et al., 1981, "Yeast tRNA3Leu gene transcribed and spliced in a HeLa cell extract." Proc. Natl. Acad. Sci. USA 78(10):5963-5967. | | | |
| | C67 | TAKAGAKI et al., 2000, "Complex protein interactions within the human polyadenylation machinery identify a novel component." Mol. Cell. Biol. 20:1515-1525. | | | |
| | C68 | TAKAKU et al., 2003, "A candidate prostate cancer susceptibility gene encodes tRNA 3' processing endoribonuclease." Nucleic Acids Res 31(9):2272-2278. | | | |
| | C69 | WAHLE & RUEGSEGGER, 1999, "3'-End processing of pre-mRNA in eukaryotes." FEMS Micro Rev., 23(3):277-295 | | | |
| | C70 | WALLACE et al., 1999, "Two distinct forms of the 64,000 Mr protein of the cleavage stimulation factor are expressed in mouse male germ cells." Proc. Natl. Acad. Sci. 96(12):6763-6768 | | | |
| | C71 | XIAO et al., 2002, "Eukaryotic ribonuclease P: a plurality of ribonucleoprotein enzymes." Annu Rev Biochem 71, 165-189. | | | |
| | C72 | YOSHIHISA et al., 2003, "Possibility of cytoplasmic pre-tRNA splicing: the yeast tRNA splicing endonuclease mainly localizes on the mitochondria." Mol Biol Cell 14(8):3266-3279. | | | |
| | C73 | ZHAO, 1999 "Formation of mRNA 3' ends in eukaryotes: mechanism, regulation, and interrelationships with other steps in mRNA synthesis." Microbiol. Mol. Biol. Rev. 63:405-445 | | | |
| | C74 | MIAO et al., 1993, "Yeast tRNA-splicing endonuclease cleaves precursor tRNA in a random pathway," J. Biol. Chem. 268(1):672-7 | | | |

NYI-3914639v3

EXAMINER

Express No.: ED 608 969 225 US Sheet 1 of 5 of List of References

| , | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 | |
|---|--------------------------------|----------------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | FILING DATE May 18, 2006 | ART UNIT | |

| | U.S. PATENT DOCUMENTS | | | | | | |
|----------------------|-----------------------|-----------------|----------|------------------|---|--|--|
| *EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR | | |
| | A01 | 2007/0020630 | 01/25/07 | Trotta C. | | | |
| ··· | A02 | 4,987,071 | 01/22/91 | Cech et al. | | | |
| | A03 | 5,093,246 | 03/03/92 | Cech et al. | | | |
| | A04 | 5,310,664 | 05/10/94 | Butow et al. | | | |
| | A05 | 5,354,855 | 10/11/94 | Cech et al. | | | |
| | A06 | 5,439,797 | 08/08/95 | Tsien et al. | | | |
| | A07 | 5,591,610 | 01/07/97 | Cech et al. | | | |
| | A08 | 5,726,195 | 03/10/98 | Hill et al. | | | |
| | A09 | 5,776,738 | 07/07/98 | Dell'Orco Sr. | | | |
| | A10 | 5,939,288 | 08/17/99 | Thornburg | | | |
| - | A11 | 5,994,124 | 11/30/99 | Bozzoni | | | |
| | A12 | 6,025,167 | 02/15/00 | Cech et al. | | | |
| | A13 | 6,180,399 | 01/30/01 | Cech et al. | | | |
| | A14 | 6,214,563 | 04/10/01 | Negulescu et al. | | | |
| | A15 | 6,221,587 | 04/27/01 | Ecker et al. | | | |
| _ | A16 | 6,221,612 | 04/24/01 | Knapp et al. | | | |
| 1 18.1. | A17 | 6,232,070 | 05/05/01 | Shuman | | | |
| | A18 | 6,446,032 | 09/03/02 | Schimmel | | | |

| | FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN) | DATE | NAME | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR | Т |
|-----|--|----------|--|---|---|
| B01 | WO 01/25486 | 04/12/01 | University of Medicine and Dentistry of New Jersey | | |
| B02 | WO 01/92463 | 12/06/01 | Istituto di biologia Cellulare, CNR | | |
| B03 | WO 02/83837 | 10/24/02 | Almstead | | |
| B04 | WO 02/83953 | 10/24/02 | PTC Therapuetics, Inc. | | |
| B05 | WO 91/09942 | 07/11/91 | Board of Regents, The University of Texas System | | |
| B06 | WO 98/49274 | 11/05/98 | Appligene-Oncor | | |
| B07 | WO 99/20795 | 04/29/99 | Melica HB | | |

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^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Express No.: <u>ED 608 969 225 US</u> Sheet 2 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 | |
|---|--------------------------------|----------------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | FILING DATE May 18, 2006 | ART UNIT 1639 | |

| | FOREIGN PATENT DOCUMENT COUNTRY CODE, NUMBER, KIND CODE (IF KNOWN) | DATE | NAME | PAGES, COLUMNS, LINES, WHERE RELEVANT PASSAGES OR RELEVANT FIGURES APPEAR | , |
|---------|--|----------|-------------------------------------|---|----------|
| B08 | WO 01/12820 | 02/22/01 | Health Research Institute | | |
| B09 | WO 02/40685 | 05/23/02 | Cornell Research Foundations, Inc. | | Г |
| B10 | WO 02/42326 | 05/30/02 | Biota Scientific Management Pty LTD | | |
| B11 | WO 04/001010 | 12/31/03 | PTC Therapeutics, Inc. | | Г |
| B12 | WO 04/087069 | 10/14/04 | PTC Therapeutics, Inc. | | Г |
| B13 | WO 04/087070 | 10/14/04 | PTC Therapeutics, Inc. | | |
| B14 | WO 04/087884 | 10/14/04 | PTC Therapeutics, Inc. | | <u> </u> |
| B15 | DE 3436818 | 04/10/89 | Hoechst AG | | |
| B16 | CN 1328156 | 12/26/01 | Wuhan Inst Of Virology Chinese | | Г |
| B17 | WO 00/67580 | 11/16/06 | SmithKline Beecham Corp. | | T |

| | | NON PATENT LITERATURE DOCUMENTS | |
|----------------------|-----|---|---|
| Examiner Initials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | Т |
| THE LUIS | C01 | ABELSON et al.,1998, "tRNA splicing." Journal of Biological Chemistry 273(21):12685-12688 | Γ |
| | C02 | ADAMS et al., 1991, "Fluorescence ratio imaging of cyclic AMP in single cells." Nature 349:694-697 | |
| | C03 | BELFORD et al., 1993, "Multiple nucleotide cofactor use by yeast ligase in tRNA splicing. Evidence for independent ATP- and GTP-binding sites" J. Biol. Chem. 268(4):2444-2450 | |
| | C04 | BELFORT, M., & WEINER, A., 1997, "Another bridge between kingdoms: tRNA splicing in archaea and eukaryotes." Cell 89(7):1003-1006. | |
| | C05 | BJORK, G., 1995, "Biosynthesis and Function of Modified Nucleosides, in tRNA: Structure, Biosynthesis and Function." D. Soll & U. RajBhandary (eds.), American Society for Microbiology, Washington DC: pp. 165-205 | |
| | C06 | DEUTSCHER, M.P., 1995 "tRNA Processing Nucleases, in tRNA:Structure, Biosynthesis and Function." D. Soll and U. RjaBhandary (eds.), American Society for Microbiology, Washington DC: pp. 51-65 | |
| | C07 | DIENER & MOORE, 1998, "Solution Structure of a Substrate for the Archael Pre-tRNA Splicing Endonucleases: The Bulge-Helix-Bulge Motif." Mol. Cell. 1:883-894 | |
| | C08 | FRUSCOLONI et al., 2001, "Cleavage of non-tRNA substrates by eukaryal tRNA splicing endonucleases." EMBO Rep 2(3):217-221 | |
| | C09 | GENBANK: Accession No: NP_079541; "tRNA splicing endonuclease 2 homolog [Homo sapiens]" | |
| | C10 | GENBANK: Accession No: NT_005927.12; "Homo sapiens chromosome 3 reference genomic contig" | |
| | C11 | GENBANK: Accession No: NT_011225.9; "Homo sapiens chromosome 19 reference genomic contig." | Γ |
| | C12 | GENBANK: Accession No: XP_085899; "similar to LENG5 protein [Homo sapiens]." | Π |
| | C13 | GOMES et al., 1997, "RNA splicing ligase activity in the archaeon Haloferax volcanii" Biochem & Biophys. Res. Comm. 237:588-94 | |
| | C14 | GREER et al., 1982, "Mechanism of action of a yeast RNA ligase in tRNA splicing" Cell 32:537-546 | |

NYI-3914639v3

EXAMINER DATE CONSIDERED

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Express No.: <u>ED 608 969 225 US</u> Sheet 3 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 | |
|---|--------------------------------|----------------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | FILING DATE May 18, 2006 | ART UNIT 1639 | |

| | | NON PATENT LITERATURE DOCUMENTS | |
|----------|---------|---|----------|
| Examiner | | | T |
| Initials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | T |
| | C15 | GREER., 1986, "Assembly of tRNA Splicing Complex: Evidence for Concerted Excision and Joining Steps in | |
| | + | Splicing In Vitro." Mol. and Cellular. Bio., 6(2):638-642 HYDE-DERUYSCHER et al., 2000, "Detection of Small-Molecule Enzyme Inhibitors with Peptides Isolated | 1 |
| | C16 | from Phage-Displayed Combinatorial Peptide Libraries." Chem. & Biol. 7:17-25 | 1 |
| | + | IKEMURA, 1985, "Codon Usage and tRNA Content in Unicellular and Multicellular Organisms." Mol. Biol. | + |
| | C17 | Evol., 2(1):13-34 | 1 |
| | 1010 | IKEMURA, T. AND OKEKI, H., 1983, "Codon usage and transfer RNA contents: organism-specific codon- | |
| | C18 | choice patterns in reference to the isoacceptor contents." Cold Spring Harbor Symp. Quant. Biol. 47:1087-1097 | |
| | | KLEMAN-LEYER et al., 1997, "Properties of H. volcanii tRNA Intron Endonuclease Reveal a Relationship | 1 |
| | C19 | between the Archaeal and Eucaryal tRNA Intron Processing Systems." Cell., 89:839-847 | |
| | 620 | LI & ABELSON, 2000, "Crystal Structure of a Dimeric Archaeal Splicing Endonuclease." J. Mol. Biol. | 1 |
| | C20 | 302:639-648. | |
| | C21 | LI et al., 1998, "Crystal structure and evolution of a transfer RNA splicing enzyme" Science 280(5361):279-284 | 1 |
| | + | | 1 |
| | C22 | LYKKE-ANDERSEN, J. & GARRETT, R.A., 1997, "RNA-protein interactions of an archaeal homotetrameric splicing endoribonuclease with an exceptional evolutionary history." EMBO J 16(20):6290-6300. | |
| | + | PHIZICKY et al., 1986, "Saccharomyces cerevisiae tRNA ligase. Purification of the protein and isolation of the | +- |
| | C23 | structural gene" J. of Biol. Chem. 261(6):2978-2986 | 1 |
| | 024 | QIN & PYLE, 1999, "Site-specific labeling of RNA with fluorophores and other structural probes." Methods 18 | |
| | C24 | (1):60-70 | |
| | C25 | REYES & ABELSON 1988, "Substrate Recognition and Splice Site Determination in Yeast tRNA Splicing." | 1 |
| | C23 | Cell, 55:719-730 | |
| | C26 | SARKAR & HOPPER., 1998, "tRNA Nuclear Export in Saccharomyces cerevisiae: In Situ Hybridization | |
| | 1 020 | Analysis." Mol. Biol. of the Cell., 9:3041-3055 | |
| | C27 | SAXENA et al., 1992, "Angiogenin is a Cytotoxic, tRNA-specific Ribonuclease in the RNase A Superfamily." | |
| | | J. of Biol. Chem. 267(30):21982-21986 | |
| | C28 | TROTTA et al., 1997, "The yeast tRNA splicing endonuclease: a tetrameric enzyme with two active site | |
| | | subunits homologous to the archaeal tRNA endonucleases." Cell 89:849-858. | \bot |
| | C29 | TROTTA, C.R. AND ABELSON, J.N., 1999, "tRNA Splicing: An RNA World Add-On or an Ancient | |
| | | Reaction? In RNA World II" Tom Cech, Ray Gesteland and John Atkins (eds.), Cold Spring Harbor Laboratory | |
| | | Press, 561-584 | |
| | C30 | TROTTA., 1999, "The Composition, Function and Evolution of the tRNA Splicing Endonuclease." Thesis, | |
| | | California Institute of Technology, pp.1-147 TSIEN et al., 1993, "FRET for studying intracellular signaling." Trends in Cell. Bio. 3(7): 242-245 | + |
| | C31 | | <u> </u> |
| - | C32 | VAUGHN et al., 2002, "Methonine In and Out of Proteins: Targets for Drug Design." Curr. Med. Chem. | 1 |
| | | 9(3):385-409 | |
| | C33 | VOLAREVIC et al., 2000, "Proliferation, But not Growth Blocked by Conditional Deletion of 40S Ribosomal | |
| | | Protein S6." Science 288:2045-2047 | |
| | C34 | WANG et al., 1990, "Substrate Masking: Binding of RNA by EGTA-Inactivated Micrococcal Nuclease Results | |
| | \bot | in Artifactual Inhibition of RNA Processing Reactions." Nuc. Acids Res. 18(22):6625-6626 | + |
| | C35 | WINTER et al., 2000, "RNA polymerase III transcription factor TFIIIC2 is overexpressed in ovarian tumors." | |
| | | Proc. Natl. Acad. Sci., 97(23):12619-12624 | + |
| | C36 | XU et al., 1990, "Purification of yeast transfer RNA ligase." Meth. in Enzymol. 181:463-471 | |
| | C37 | Yeast Accession No: M32336; SEN2: "http://www.yeastgenome.org/" | |

NYI-3914639v3

| EXAMINER | DATE CONSIDERED |
|----------|-----------------|
|----------|-----------------|

Express No.: <u>ED 608 969 225 US</u> Sheet 4 of 5 of List of References

| | ATTY. DOCKET NO. 10589-033-999 | APPLICATION NO. 10/551,304 | |
|---|--------------------------------|----------------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | FILING DATE May 18, 2006 | ART UNIT 1639 | |

| | | NON PATENT LITERATURE DOCUMENTS | |
|----------|-----|---|---|
| Examiner | | | _ |
| Initials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | T |
| | C38 | Yeast Accession No: YAR008w; SEN34 "http://www.yeastgenome.org/" | |
| | C39 | Yeast Accession No: YMR059w; SEN 15 "http://www.yeastgenome.org/" | |
| | C40 | Yeast Accession No: YPL083c; SEN54 "http://www.yeastgenome.org/" | |
| | C41 | ZHANG et al., 1997, "Gene Expression Profiles in Normal and Cancer Cells." Science 276:1268-1272 | |
| | C42 | BALDI et al., 1992, "Participation of the intron in the reaction catalyzed by the Xenopus tRNA splicing endonuclease." Science 255:1404-1408. | |
| | C43 | BARBINO & KELLLER, 1999, "Last but not least: regulated poly(A) tail formation." Cell 99(1):9-11 | |
| | C44 | BUJNICKI, J.M., & RYCHLEWSKI, L., 2000, "Prediction of a common fold for all four subunits of the yeast tRNA splicing endonuclease: implications for the evolution of the EndA/Sen family." FEBS Lett 486: 328-329. | |
| | C45 | BUVOLI et al, 2000, "Suppression of nonsense mutations in cell culture and mice by multimerized suppressor tRNA genes" Molecular and Cellular Biology 20(9):3116-3124 | |
| | C46 | CALVO, O., AND MANLEY, J.L., 2003, "Strange bedfellows: polyadenylation factors at the promoter." Genes Dev 17(11):1321-1327. | |
| | C47 | CHOI AND DREYFUSS, 1984, "Monoclonal antibody characterization of the C proteins of heterogeneous nuclear ribonucleoprotein complexes in vertebrate cells." J. Cell. Biol. 99(6):1997-2004 | |
| | C48 | CULVER et al., 1997, "A 2'-phosphotransferase implicated in tRNA splicing is essential in <i>Saccharomyces cerevisiae</i> ." J Biol Chem 272:13203-13210. | |
| | C49 | DE VRIES, H. et al., 2000, "Human pre-mRNA cleavage factor II(m) contains homologs of yeast proteins and bridges two other cleavage factors." EMBO J 19:5895-5904. | |
| | C50 | FABBRI, S et al., 1998, "Conservation of substrate recognition mechanisms by tRNA splicing endonucleases." Science 280, 284-286. | |
| | C51 | FRANK & PACE, 1998, "Ribonuclease P: unity and diversity in a tRNA processing ribozyme." Annu Rev Biochem 67, 153-180. | |
| | C52 | GANDINI-ATTARDI, et al., 1990, "Transfer RNA splicing endonuclease from <i>Xenopus laevis</i> ." Methods Enzymol 181:510-517. | |
| | C53 | HIROSE AND MANLEY, 2000, "RNA polymerase II and the integration of nuclear events." Genes Dev., 14(12):1415-1429 | |
| v | C54 | HOPPER, A.K., AND PHIZICKY, E.M., 2003, "tRNA transfers to the limelight." Genes Dev 17(2):162-180. | |
| | C55 | HUH, et al., 2003, "Global analysis of protein localization in budding yeast." Nature 425:686-691. | |
| | C56 | JACOBSON et al., 1997, "Nuclear domains of the RNA subunit of RNase P." J Cell Sci. 110 (Pt 7):829-837. | |
| | C57 | LASKI, F.A. et al., 1983, "Characterization of tRNA precursor splicing in mammalian extracts." J Biol. Chem. 258(19):11974-11980. | |
| | C58 | MINVIELLE-SEBASTIA, L. & KELLER, W., 1999, "mRNA polyadenylation and its coupling to other RNA processing reactions and to transcription." Curr. Opin. Cell. Biol. 11:352-357 | |
| | C59 | O'CONNOR, J.P., & PEEBLES, C.L., 1992, "PTA1, an essential gene of Saccharomyces cerevisiae affecting pre-tRNA processing." Mol Cell Biol 12:3843-3856. | |
| | C60 | OTSUKA, et al., 1981, "Ribonuclease 'Xlal' an activity from Xenopus laevis oocytes that excises intervening sequences from yeast transfer ribonucleic acid precursors." Mol Cell Biol 1:269-280. | |
| | C61 | PARK & BHANDARY, 1998, "Tetracycline-regulated suppression of amber codons in mammalian cells." Mol. & Cell. Biol. 18:4418-4425 | |
| | C62 | PREKER et al., 1997, "A multisubunit 3'-end processing factor from yeast containing poly(A) polymerase and | † |

NYI-3914639v3

EXAMINER DATE CONSIDERED

Express No.: ED 608 969 225 US Sheet 5 of 5 of List of References

| | ATTY. DOCKET NO. APPLICATION NO. 10589-033-999 10/551,304 | | |
|---|---|------------------|--|
| LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary) | APPLICANT Trotta, C. | | |
| | filing date May 18, 2006 | art unit 1639 | |

| NON PATENT LITERATURE DOCUMENTS | | | | | | |
|---------------------------------|-----|--|---|--|--|--|
| Examiner Initials | | (Include name of the author (in CAPITAL LETTERS), Title, Date, Pertinent Pages, Etc.) | Т | | | |
| | | homologues of the subunits of mammalian cleavage and polyadenylation specificity factor." EMBO J 16:4727-4737. | | | | |
| | C63 | PROUDFOOT, 2000, "Connecting transcription to messenger RNA processing." Trends Biochem Sci. 2000 Jun;25(6):290-3. Review. | | | | |
| | C64 | RAUHUT et al., 1990, "Yeast tRNA-splicing endonuclease is a heterotrimeric enzyme." J Biol. Chem. 265(30): 18180-18184. | | | | |
| | C65 | REYES et al., 1987, "A synthetic substrate for tRNA splicing." Anal. Biochem. 166(1):90-106 | | | | |
| | C66 | STANDRING et al., 1981, "Yeast tRNA3Leu gene transcribed and spliced in a HeLa cell extract." Proc. Natl. Acad. Sci. USA 78(10):5963-5967. | | | | |
| | C67 | TAKAGAKI et al., 2000, "Complex protein interactions within the human polyadenylation machinery identify a novel component." Mol. Cell. Biol. 20:1515-1525. | | | | |
| | C68 | TAKAKU et al., 2003, "A candidate prostate cancer susceptibility gene encodes tRNA 3' processing endoribonuclease." Nucleic Acids Res 31(9):2272-2278. | | | | |
| | C69 | WAHLE & RUEGSEGGER, 1999, "3'-End processing of pre-mRNA in eukaryotes." FEMS Micro Rev., 23(3):277-295 | | | | |
| | C70 | WALLACE et al., 1999, "Two distinct forms of the 64,000 Mr protein of the cleavage stimulation factor are expressed in mouse male germ cells." Proc. Natl. Acad. Sci. 96(12):6763-6768 | | | | |
| | C71 | XIAO et al., 2002, "Eukaryotic ribonuclease P: a plurality of ribonucleoprotein enzymes." Annu Rev Biochem 71, 165-189. | | | | |
| | C72 | YOSHIHISA et al., 2003, "Possibility of cytoplasmic pre-tRNA splicing: the yeast tRNA splicing endonuclease mainly localizes on the mitochondria." Mol Biol Cell 14(8):3266-3279. | | | | |
| | C73 | ZHAO, 1999 "Formation of mRNA 3' ends in eukaryotes: mechanism, regulation, and interrelationships with other steps in mRNA synthesis." Microbiol. Mol. Biol. Rev. 63:405-445 | | | | |
| | C74 | MIAO et al., 1993, "Yeast tRNA-splicing endonuclease cleaves precursor tRNA in a random pathway," J. Biol. Chem. 268(1):672-7 | | | | |

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